

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (withdrawn): A nucleic acid probe for measuring human gene expression, comprising:

a nucleotide sequence as set forth in any one of SEQ ID NOs: 13,701 – 27,400, the complement thereof, or a fragment of said SEQ ID NO: or said complement, wherein said probe is a single exon probe that hybridizes under high stringency conditions to a nucleic acid molecule expressed in human cells or tissues.

Claim 2 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 4, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human brain.

Claim 3 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein:

said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 5, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human heart.

Claim 4 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 6, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human liver.

Claim 5 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 7, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human fetal liver.

Claim 6 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 8, the complement thereof, or a fragment of said SEQ ID NO: or said complement,

and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human placenta.

Claim 7 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 9, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human lung.

Claim 8 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 10, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human bone marrow.

Claim 9 (withdrawn): A single exon nucleic acid probe according to claim 1, wherein: said nucleotide sequence is selected from the exon SEQ ID NOs: set forth in Table 11, the complement thereof, or a fragment of said SEQ ID NO: or said complement, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in HeLa cells.

Claim 10 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said fragment includes at least 20 contiguous nucleotides of said SEQ ID NO: or the complement thereof.

Claim 11 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said fragment includes at least 25 contiguous nucleotides of said SEQ ID NO: or the complement thereof.

Claim 12 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said fragment includes at least 50 contiguous nucleotides of said SEQ ID NO: or the complement thereof.

Claim 13 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said probe further comprises, contiguous to a first end of said fragment, a first intronic and/or intergenic sequence that is identically contiguous to said fragment in the human genome.

Claim 14 (withdrawn): The single exon nucleic acid probe of claim 13, wherein said probe further comprises, contiguous to a second end of said fragment, a second intronic and/or intergenic sequence that is identically contiguous to said fragment in the human genome.

Claim 15 (withdrawn): The single exon nucleic acid probe of claim 14, wherein said probe comprises a nucleotide sequence selected from any one of SEQ ID NOs: 1 - 13,700, or the complement thereof.

Claim 16 (withdrawn): The single exon nucleic acid probe of claim 15, wherein: said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 4, or the complement thereof, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human brain.

Claim 17 (withdrawn): The single exon nucleic acid probe of claim 15, wherein: said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 5, or the complement thereof, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human heart.

Claim 18 (withdrawn): The single exon nucleic acid probe of claim 15, wherein: said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 6, or the complement thereof, and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human liver.

Claim 19 (withdrawn): The single exon nucleic acid probe of claim 15, wherein:
said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 7, or the complement thereof,
and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human fetal liver.

Claim 20 (withdrawn): The single exon nucleic acid probe of claim 15, wherein:
said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 8, or the complement thereof,
and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human placenta.

Claim 21 (withdrawn): The single exon nucleic acid probe of claim 15, wherein said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 9, or the complement thereof,
and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human lung.

Claim 22 (withdrawn): The single exon nucleic acid probe of claim 15, wherein:

said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 10, or the complement thereof,
and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in human bone marrow.

Claim 23 (withdrawn): The single exon nucleic acid probe of claim 15, wherein:
said probe comprises a nucleotide sequence selected from the probe SEQ ID NOs: set forth in Table 11, the complement thereof, or a fragment of said SEQ ID NO: or said complement,
and wherein said probe hybridizes under high stringency conditions to a nucleic acid molecule expressed in HeLa cells.

Claim 24 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said probe is no more than 25 kb in length.

Claim 25 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said probe is no more than 5 kb in length.

Claim 26 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said probe lacks prokaryotic and bacteriophage vector sequence.

Claim 27 (withdrawn): The single exon nucleic acid probe of claim 1, wherein said probe lacks homopolymeric stretches of A or T.

Claim 28 (withdrawn): A nucleic acid probe for measuring human gene expression, comprising:

a nucleotide sequence that encodes, or the complement of which encodes, at least 8 amino acids of any one of SEQ ID NOs:27,401 - 34,288, wherein said probe is a single exon probe that hybridizes under high stringency conditions to a nucleic acid molecule expressed in human cells or tissues.

Claim 29 (withdrawn): A spatially-addressable set of single exon nucleic acid probes for measuring human gene expression, comprising:

a plurality of single exon nucleic acid probes according to claim 1, wherein each of said plurality of probes is separately and addressably isolatable or amplifiable from said plurality.

Claim 30 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein each of said plurality of probes is amplifiable using at least one common primer.

Claim 31 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein said set comprises between 50 - 20,000 single exon nucleic acid probes.

Claim 32 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein the average length of the single exon nucleic acid probes is between 50 bp and 750 bp.

Claim 33 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein at least 50% of said single exon nucleic acid probes lack prokaryotic and bacteriophage vector sequence.

Claim 34 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein at least 50% of said single exon nucleic acid probes lack homopolymeric stretches of A or T.

Claim 35 (withdrawn): The spatially-addressable set of single exon nucleic acid probes of claim 29, wherein said probes are addressably disposed upon a substrate.

Claim 36 (withdrawn): A single exon microarray for measuring human gene expression, comprising:

a spatially-addressable plurality of single exon nucleic acid probes according claim 1.

Claim 37 (withdrawn): A single exon microarray for measuring human gene expression, comprising:

a spatially-addressable plurality of single exon nucleic acid probes according to any one of claims 2 - 28.

Claim 38 (withdrawn): The single exon microarray of claim 36, wherein said plurality of single exon nucleic acid probes averages at least 50 bp in length.

Claim 39 (withdrawn): The single exon microarray of claim 36, wherein said plurality of single exon nucleic acid probes averages at least 75 bp in length.

Claim 40 (withdrawn): The single exon nucleic acid microarray of claim 36, wherein said single exon nucleic acid probes are noncovalently bound to the substrate of said microarray.

Claim 41 (withdrawn): A method of measuring human gene expression, comprising:
contacting the microarray of claim 36 with a first plurality of detectably labeled nucleic acids, said first plurality of nucleic acids being derived from human gene transcripts; and
then

measuring the label detectably bound to each probe of said microarray,
said measures of detected label providing a measure of human gene expression.

Claim 42 (withdrawn): The method of claim 41, further comprising:
contacting said microarray with a second plurality of detectably labeled nucleic acids;
measuring the label detectably bound to each probe of said microarray; and
comparing said first and second measurements,
said comparative measures of detected label providing a measure of human gene
expression.

Claim 43 (withdrawn): The method of claim 42, wherein said first and second pluralities
are distinguishably labeled and simultaneously contacted to said microarray.

Claim 44 (withdrawn): A vector, comprising: the single exon probe of claim 1.

Claim 45 (withdrawn): An ORF-encoded peptide, comprising: at least 8 contiguous
amino acids of any one of SEQ ID NOs:27,401 - 34,288 or at least 8 contiguous amino
acids of any one of SEQ ID NOs:27,401 - 34,288 with conservative amino acid
substitutions.

Claim 46 (withdrawn): The ORF-encoded peptide of claim 45, wherein said peptide comprises at least 15 contiguous amino acids of any one of SEQ ID NOs:27,401 - 34,288 or at least 15 contiguous amino acids of any one of SEQ ID NOs:27,401 - 34,288 with conservative amino acid substitutions.

Claim 47 (withdrawn): An isolated antibody, wherein said antibody binds specifically to a peptide according to claim 45.

Claim 48 (original): A method of selling and/or licensing single exon probes to a customer desiring to measure gene expression, comprising:
making available for computerized query a database having a plurality of records, each record corresponding to a single exon probe according to claim 1,
wherein said database responds to a customer query by returning to the customer at least one record, or an identifier of said record, that satisfies the customer query criteria, the probes to which said records correspond being available for sale and/or licensing.

Claim 49 (original): A method of selling and/or licensing single-exon microarrays to a customer desiring to measure gene expression, comprising:
making available for computerized query a database having a plurality of records, each record corresponding to a microarray according to claim 36,

wherein said database responds to a customer query by returning to the customer at least one record, or an identifier of said record, that satisfies the customer query criteria, the microarrays to which said records correspond being available for sale and/or licensing.

Claim 50 (withdrawn): A method of providing human gene expression data by subscription, comprising:

making available for computerized query a database having a plurality of records, each record including data on the expression of a single exon probe according to claim 1, wherein said database responds to a query by a customer having a subscription, but not to a query by a customer lacking such subscription, by returning at least one record, or identifier of said at least one record, that satisfies the customer query criteria.

Claim 51 (withdrawn): A computer readable storage medium storing instructions that, when executed by a computer, causes the computer to perform the method of any one of claims 48 to 51.

Claim 52 (withdrawn): A computer system, comprising a processor programmed to perform the method of any one of claims 48 to 51.

Claim 53 (withdrawn): A computer readable storage medium containing a database having a plurality of records, each record including data on the expression of a single exon probe according to claim 1.